

# EUROPEAN PATENT OFFICE

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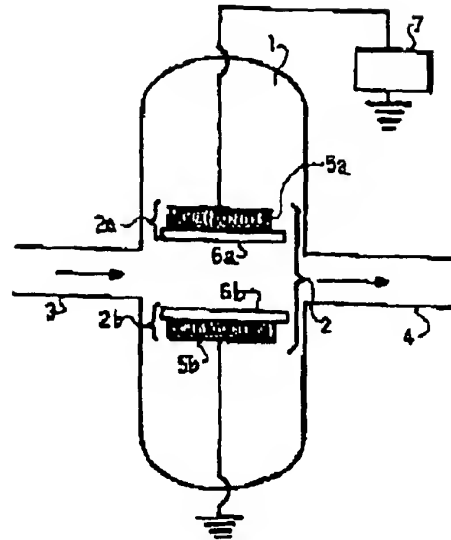
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TITLE : ELECTRODE FOR GENERATING  
GLOW DISCHARGE PLASMA AND  
REACTOR USING THE SAME



ABSTRACT : PURPOSE: To generate uniform and stable glow discharge not only at a high frequency but also at a low frequency by means of a gas which cannot conventionally generate glow discharge under an air pressure equal to or higher than an atmospheric pressure by using a glow discharge plasma generating electrode which can be reduced in weight and formed in an arbitrary shape.

CONSTITUTION: A glow discharge plasma generating electrode is constituted of a metal fine wire electrode 2 formed in a volume of a porosity of 70% or less by the use of a metal fine wire having a diameter of 0.01-0.5mm according to the kind of plasma generating gas; and a dielectric 6 disposed in contact with the metal fine wire electrode 2. The electrodes 2 are disposed at an equal interval as counter electrodes with the dielectric on the discharging surface side in a gaseous phase of a reactor under a pressure equal to or higher than an atmospheric pressure so as to apply a predetermined voltage between the electrodes, thus generating glow discharge. Since the electrode 2 is provided at least on one side of the reactors, a stable atmospheric glow discharge plasma can be obtained for each target gas.

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